

Listing of Claims:

1. (Currently Amended) A microfluidic device for assaying a liquid biological sample of 20 μ L or less comprising:

- (a) an inlet port for receiving said sample;
- (b) an enclosed unidirectional capillary passageway in fluid communication with said inlet port;
- (c) an enclosed inlet chamber in fluid communication at one side thereof with the enclosed unidirectional capillary passageway of (b), thereby providing said sample an entry into said enclosed inlet chamber, said enclosed inlet chamber containing ~~means for uniformly distributing said sample~~ a microstructure comprising a uniform array of posts disposed to force said sample to change direction as it passes through said array of posts across said chamber; and
- (d) at least one vent passageway for removing air displaced by said liquid sample at a side of said enclosed inlet chamber opposite the entry of said capillary passageway.

2. (Currently Amended) A microfluidic device of Claim 1 wherein said ~~means for uniformly distributing said sample~~ is enclosed inlet chamber includes at least one groove extending across said inlet chamber.

3. (Currently Amended) A microfluidic device of Claim 1 wherein said ~~means for uniformly distributing said sample~~ is enclosed inlet chamber includes at least one weir extending across said inlet chamber.

4. (Original) A microfluidic device of Claim 2 or 3 wherein said at least one groove or at least one weir contains wedge-shaped cutouts to facilitate uniform flow of said sample.

5. (Canceled)

6. (Currently Amended) A microfluidic device of Claim ~~5-1~~ 5-1 wherein said posts contain wedge-shaped cutouts to facilitate uniform flow of said sample.

7. (Original) A microfluidic device of Claim 1 wherein said inlet port is tapered to engage the corresponding shape of a pipette for depositing said sample

8. (Previously Presented) A microfluidic device of Claim 1 wherein said inlet chamber contains reagents and/or filters.

9. (Original) A microfluidic device of Claim 1 further comprising an overflow chamber in fluid communication with said inlet chamber, said overflow chamber for receiving said sample in excess of the amount needed to fill said inlet chamber.

10. (Original) A microfluidic device of Claim 9 wherein said overflow chamber contains an indicator to detect the presence of excess of said sample.

11. (Cancelled).

12. (Cancelled).

13. (Cancelled).